

A printing system making use of a lithographic printing plate has been disclosed, said system comprising the steps of image-wise exposing to infrared light a heat sensitive imaging element, said element being optionally present on the printing press before starting said image-wise exposing step to infrared light, wherein said element comprises, on a lithographic base with a hydrophilic surface thereupon, an image-forming layer including hydrophobic thermoplastic polymer particles and a hydrophilic polymer binder, and, optionally, an infrared absorbing compound, wherein said hydrophobic polymer particles contain more than 0.1 wt % of nitrogen and have an average particle size diameter in the range from 0.015 to 0.150  $\mu\text{m}$ ; developing the image-wise exposed imaging element by mounting it on a print cylinder of a printing press and applying an aqueous dampening liquid and/or ink to said imaging element while rotating said print cylinder; providing a printing run length of said press, increased with a factor of at least 5, when reducing the average particle size diameter of said hydrophobic polymer particles in an amount of more than 25 %.